

Writing Equations for Formulas

Math Content

Students will write, compare, and solve problems using formulas that describe patterns with multiple variables.

1. Rewrite each formula without parentheses.

a. $Length = 7(L + S)$

b. $Length = 2(U + 5D)$

c. $Height = 3(4S + 3T)$

d. $Height = 5(10S + 2L)$

2. Rewrite each formula with parentheses.

a. $Length = 4L + 12S$

b. $Length = 14U + 21D$

c. $Height = 20S + 15T$

d. $Height = 51S + 17L$

3. Which formula describes a different pattern from the rest?

A. $Length = 12L + 8S$

B. $Length = 2(6L + 4S)$

C. $Length = 3(4L + 3S)$

D. $Length = 4(3L + 2S)$

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6. Sam places bricks in a row so that they sometimes lay sideways (on their long side) and at other times stand upright (on their short side). He uses a formula to predict the length of a row of the resulting pattern. In his formula, S is the length of the short side of a brick and L is the length of the long side.

- a. Write a formula for the length of a row that uses six standing bricks and nine laying bricks.
- _____

- b. Which row of bricks matches the description in part a?



- c. Is it possible to write the formula you made in part a with parentheses? Explain.
- _____
- _____

- d. What is true of a row of bricks with a formula that cannot be written with parentheses?
- _____
- _____

- e. Sam uses bricks that have a long side that is 20 centimeters and a short side that is 6 centimeters. What will be the length of the row described in part a?
- _____